UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,818	05/15/2001	Gerald R. Malan	UOM0206PUSP	9686

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EXAMINER
GELAGAY, SHEWAYE

ART UNIT	PAPER NUMBER
2133	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/855,818	MALAN ET AL.
	Examiner	Art Unit	
	Shewaye Gelagay	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>15 May 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 May 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
     application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>08/06/01; 3/29/02</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   Claims 1-16 have been examined.

Drawings

2.   The drawings are objected to because figures 1-15 do not have reference numbers for

each item. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply

to the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet,

even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

must be removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement

Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the

drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

and informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4.   Claims 1-3 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, R. N. et al. ("Operating Firewalls Outside the LAN Perimeter") in view of Vu United States Letters Patent Number 5,623,601.

As per claim 1:

Smith et al. disclose a method for protecting publicly accessible network computer services from undesirable network traffic in real-time, the method comprising:

analyzing the network traffic to identify an undesirable user of the services; and (Page 494, Col. 1, Parag. 2 and Page 497, Col. 2, Parag. 1)

limiting access of the undesirable user to the services to protect the services. (Page 496, Col. 2, Parag. 3 and Page 498, Col. 1; Parag. 1)

Smith et al. do not explicitly disclose receiving network traffic destined for the services.

Vu in analogous art, however, discloses receiving network traffic destined for the services. (Col. 4, lines 22-25)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Smith et al. to include receiving

network traffic destined for the services. This modification would have been obvious because a

person having ordinary skill in the art would have been motivated to do so in order to provide a

secure system to protect the network system from all incoming network traffic.

As per claim 2:

Both Smith et al. and Vu teach the subject matter as described above. In addition, Smith

et al. disclose a method wherein the undesirable network traffic includes denial of service

attacks. (Page 494, Col. 2, Para. 6)

As per claim 3:

Both Smith et al. and Vu teach the subject matter as described above. In addition, Smith

et al. disclose a method wherein the network is the Internet. (Page 493, Col. 1, Para. 1 and 2)

As per claim 9:

Smith et al. disclose a system for protecting publicly accessible network computer

services from undesirable network traffic in real-time, the system comprising: an interface for

a analysis engine for analyzing the network traffic to identify an undesirable user of the

services; and (Page 494, Col. 1, Parag. 2 and Page 497, Col. 2, Parag. 1)

a forwarding engine in communication with the analysis engine for limiting access of the

undesirable user to the services to protect the services. (Page 496, Col. 2, Parag. 3 and Page 498,

Col. 1; Parag. 1)

Smith et al. do not explicitly disclose receiving network traffic destined for the services.

Vu in analogous art, however, discloses receiving network traffic destined for the

services. (Col. 4, lines 22-25)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to modify the method disclosed by Smith et al. to include receiving

network traffic destined for the services. This modification would have been obvious because a

person having ordinary skill in the art would have been motivated to do so in order to provide a

secure system to protect the network system from all incoming network traffic.

As per claim 10:

Both Smith et al. and Vu teach the subject matter as described above. In addition, Smith

et al. disclose a system wherein the undesirable network traffic includes denial of service attacks.

(Page 494, Col. 2, Para. 6)

As per claim 11:

Both Smith et al. and Vu teach the subject matter as described above. In addition, Smith

et al. disclose a method wherein the network is the Internet. (Page 493, Col. 1, Para. 1 and 2)

5.   Claims 4-7 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Smith, R. N. et al. ("Operating Firewalls Outside the LAN Perimeter") in view of Vu United

States Letters Patent Number 5,623,601 and further in view of Combar et al. United States

Letters Patent Number 6,470,386.

As per claim 4:

Both Smith et al. and Vu teach the subject matter as described above. Neither of the

references explicitly disclose a method comprising generating one or more user profiles from the

network traffic wherein the step of analyzing includes the step of comparing the one or more user

profiles with a predetermined profile to determine the undesirable user.

Combar et al. in analogous art, however, disclose a method further comprising generating

one or more user profiles from the network traffic wherein the step of analyzing includes the step

of comparing the one or more user profiles with a predetermined profile to determine the

undesirable user. (Col. 1, lines 62-63)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to modify the method disclosed by Smith et al. and Vu to include a

method further comprising generating one or more user profiles from the network traffic wherein

the step of analyzing includes the step of comparing the one or more user profiles with a

predetermined profile to determine the undesirable user. This modification would have been

obvious because a person having ordinary skill in the art would have been motivated to do so in

order to protect the system by comparing the generated user profile. This way, the system will

check for already existing undesirable profiles user in order to limit access to the network.

As per claim 5:

Smith et al., Vu and Combar et al. teach the subject matter as described above. In

addition, Combar et al. disclose a method wherein the step of generating the one or more user

profiles includes the step of generating request statistics for the user from the network traffic.

(Col. 1, lines 49-52)

As per claim 6:

Smith et al., Vu and Combar et al. teach the subject matter as described above. In

addition, Combar et al. disclose a method wherein the request statistics include connection

statistics and service request distributions. (Col. 1, lines 23-28)

As per claim 7:

Smith et al., Vu and Combar et al. teach the subject matter as described above. In addition, Smith et al. further disclose a method wherein the network is the Internet and wherein the step of generating request statistics includes the steps of collecting and correlating Border Gateway Protocol (BGP) data from the Internet to obtain the service request distributions. (Page 497, Col. 1, Parag. 2 ; and Col. 2, Parag. 2)

As per claim 12:

Both Smith et al. and Vu teach the subject matter as described above. Neither of the references explicitly disclose a system comprising forwarding engine generating one or more user profiles from the network traffic wherein the step of analyzing includes the step of comparing the one or more user profiles with a predetermined profile to determine the undesirable user.

Combar et al. in analogous art, however, disclose a system further comprising forwarding engine generating one or more user profiles from the network traffic wherein the step of analyzing includes the step of comparing the one or more user profiles with a predetermined profile to determine the undesirable user. (Col. 1, lines 62-63)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the system disclosed by Smith et al. and Vu to include a method further comprising generating one or more user profiles from the network traffic wherein the step of analyzing includes the step of comparing the one or more user profiles with a predetermined profile to determine the undesirable user. This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so in

order to protect the system by comparing the generated user profile. This way, the system will

check for already existing undesirable profiles user in order to limit access to the network.

As per claim 13:

Smith et al., Vu and Combar et al. teach the subject matter as described above. In

addition, Combar et al. disclose a system wherein the forwarding engine generates the user

profile by generating request statistics for the user from the network traffic. (Col. 1, lines 49-52)

As per claim 14:

Smith et al., Vu and Combar et al. teach the subject matter as described above. In

addition, Combar et al. disclose a system wherein the request statistics include connection

statistics and service request distributions. (Col. 1, lines 23-28)

As per claim 15:

Smith et al., Vu and Combar et al. teach the subject matter as described above. In

addition, Smith et al. further disclose a system wherein the network is the Internet and wherein

the forwarding engine collects and correlates Border Gateway Protocol

(BGP) data from the Internet to obtain the service request distributions. (Page 497, Col. 1, Parag.

2; and Col. 2, Parag. 2)

6.   Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith, R.

N. et al. ("Operating Firewalls Outside the LAN Perimeter") in view of Vu United States Letters

Patent Number 5,623,601 in view of Combar et al. United States Letters Patent Number

6,470,386 and further in view of Nessett et al. United States Letters Patent Number 5,968,176.

As per claim 8:

Smith et al., Vu and Combar et al. teach the subject matter as described above. Neither of

the references explicitly disclose a method wherein the step of correlating includes the step of

identifying a topologically clustered set of machines in the Internet based on the data and

wherein the service request distributions are generated from the set of machines.

Nessett et al. in analogous art, however, disclose a method wherein the step of

correlating includes the step of identifying a topologically clustered set of machines in the

Internet based on the data and wherein the service request distributions are generated from the

set of machines. (Col. 4, lines 7-17 and lines 28-45)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to modify the method disclosed by Smith et al., Vu and Combar et

al to include a method wherein the step of correlating includes the step of identifying a

topologically clustered set of machines in the Internet based on the data and wherein the service

request distributions are generated from the set of machines. This modification would have been

obvious because a person having ordinary skill in the art would have been motivated to do so in

order to identify and redirect undesirable network traffic.

As per claim 16:

Smith et al., Vu and Combar et al. teach the subject matter as described above. Neither of

the references explicitly disclose a system wherein wherein the forwarding engine identifies a

topologically clustered set of machines in the Internet based on the data and wherein the service

request distributions are generated from the set of machines.

Nessett et al. in analogous art, however, disclose a system wherein the forwarding engine

identifies a topologically clustered set of machines in the Internet based on the data and wherein

the service request distributions are generated from the set of machines. (Col. 4, lines 7-17 and

lines 28-45)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to modify the system disclosed by Smith et al., Vu and Combar et

al to include a method wherein the step of correlating includes the step of identifying a

topologically clustered set of machines in the Internet based on the data and wherein the service

request distributions are generated from the set of machines. This modification would have been

obvious because a person having ordinary skill in the art would have been motivated to do so in

order to identify and redirect undesirable network traffic.

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

        a. Glawitsch U.S. 6,772,334

        This reference pertains to system and method for preventing a spoofed denial of service

attack in a networked computing environment.

        b. Belissent U.S. 6,789,203

        This reference pertains to preventing a DoS attack without notifying the DoS attacker.

        c. Shipley U.S. 6,119,236

        This reference pertains to an intelligent network device operates in a local area network.

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Shewaye Gelagay whose telephone number is 571-272-4219.
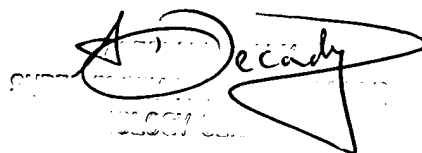
The examiner can normally be reached on 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shewaye Gelagay
Examiner
Art Unit 2133

11/12/03